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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,537	12/03/2003	George W. McClurg	1823.0820002	3202
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STERNE, KESSLER, GOLDSTEIN & FOX PLLC 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER TUCKER, WESLEY J	
			ART UNIT	PAPER NUMBER
			2623	

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/725,537	Applicant(s) MCCLURG ET AL.	
	Examiner Wes Tucker	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment and Arguments

1. Applicant's amendment filed October 28th 2005 has been entered and made of record.
2. Applicant has amended claims 1, 7, 20, 23 and 27. Applicant has added new claims 31-34. Claims 1-34 are now pending.
3. Applicants arguments are have been fully considered and are found to be persuasive in view of the newly presented amendment. However, the arguments are considered moot in view of the newly presented rejection necessitated by the newly amended claims.

Claim Objections

The objection to claim 27 is hereby withdrawn in view of Applicant's amendment.

Claim Rejections - 35 USC § 112

Withdrawals

The 112 rejection applied to claims 7 and 8 are hereby withdrawn in view of Applicant's amendment.

The 112 rejection applied to claims 17 and 18 are hereby withdrawn in view of Applicant's amendment and clarification of the term "writer's palm."

New 112 Rejections

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 uses the language "capture image data of a portion of a person interacting with the non-planar prism." It should be clear from the claims and the specification that image data is captured of a hand/palm/fingerprint. The claims should be amended to clarify this. Image data is not captured of a "portion of a person." That sounds like taking a picture of their face or body. Appropriate correction is required to place the claims in the scope of the specification.

The same discussion applies to the language "generates image data therefrom of a person interacting with the curved portion" in claim 27. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-7, 9-11, 13, 14, 20, 23 and 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,528,355 to Maase et al.

With regard to claim 1, Maase discloses a system for capturing biometric data, comprising:

A non-planar prism comprising a curved portion and a planar portion, non-planar prism configured to be illuminated by a light source (Fig. 6); and

A scanning optical system configured to capture image data of a portion of a person interacting with the non-planar prism (Figs. 1B and 3 and column 2, lines 35-55).

With regard to claim 2, Maase discloses the system of claim 1, wherein :

The curved portion configured to receive a biometric object of the person on a first, outside surface (Fig. 3, surface 11) and to totally internally reflect light beams from the light source (Fig. 3, element 36) from a second, inside surface (Fig. 3, element 30).

Maase further discloses the planar portion is coupled at an angle to the curved portion through which the totally internal reflected light exits to be received by the scanning optical system (Fig. 3, elements 38 and 44).

With regard to claim 4, Maase discloses the system of claim 1, wherein an image in the scanning optical system rotates a received image to perform the scanning (Fig. 6).

With regard to claim 5, Maase discloses a dove prism (Fig. 6).

With regard to claim 6, Maase discloses the system of claim 1, wherein the scanning optical system moves along an arcuate path to capture radial scan line images transmitted through a base of the non-planar prism (Fig. 3, element 28). Here the arc of the curved surface is where the image is captured using scan lines projected by the light source.

With regard to claim 7, Maase discloses the system of claim 1, further comprising a processing system that converts the captured image into transmissible information that is transmitted by a communications system (column 10, lines 7-18).

With regard to claim 9, Maase discloses the system of claim 1, further comprising a processing system comprising a means for converting the captured image data from a first coordinate system into image data in a second coordinate system (Figs. 4A-4C and 12). The first coordinate system is the coordinates of the scanning surface that must be reflected through the imaging system to a second set of imaged coordinates.

With regard to claim 10, Maase discloses the system of claim 9, wherein the first coordinate system is a surface of the non-planar prism and the second coordinate system is a planar coordinate system (Figs. 4A-4C and 12). The first coordinate system

is the coordinates of the scanning surface that must be reflected through the imaging system to a second set of imaged coordinates.

With regard to claim 11, Maase discloses the system of claim 1, further comprising an encoder configured to encode a position of the scanning optical system and to generate encoder data (column 5, lines 45-50). The stepper system steps the scanning system. In order to later assemble the scan lines, the position of the scanner must be encoded.

With regard to claim 13, Maase discloses the system of claim 1, wherein the non-planar prism and the scanning optical system are configured to capture a palm print image as the image data (Fig. 2A and 2B).

With regard to claim 14, Maase discloses the system of claim 1, wherein the non-planar prism and the scanning system are configured to capture palm print and fingerprint images as the image data (Figs. 2A and 2B).

With regard to claim 20, Maase discloses the system of claim 1, wherein the light source is positioned to direct light from the light source to an inside surface of the curved portion of the non-planar prism configured to totally internally reflect the light so that the light exits the planar portion of the non-planar prism (Fig. 6).

With regard to claim 23, Maase discloses the system of claim 1, wherein the light source is position proximate a chamfered edge of the prism (Fig. 3, elements 36 and 30).

With regard to claim 27, Maase discloses a system for capturing biometric data comprising:

A non-planar prism configured to totally internally reflect light from a curved portion (Fig. 3, element 28), such that the totally internally reflected light exits a planar portion (Fig. 3, element 32).

Maase further discloses an image capturing system that receives the totally internally reflected light and generates image data therefrom of a person interacting with the curved portion (column 4, lines 56-67).

With regard to claim 28, Maase discloses wherein the image capturing system comprises a stationary lens (Fig. 3, element 46) and a stationary large area array (Fig. 2, elements 44 and 48).

With regard to claim 29, Maase discloses wherein the lens is sized to capture all light leaving the non-planar prism that has been totally internally reflected from a section of the non-planar prism proximate an area in which the person interacted with the non-planar prism (Fig. 6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 12, 22 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of U.S. Patent 5,528,355 to Maase et al. and U.S. Patent 4,684,802 to Hakenworth et al.

With regard to claim 3, Maase discloses the system of claim 1, but does not explicitly disclose wherein the scanning optical system rotates around an axis of symmetry of the non-planar prism. Hakenworth discloses a scanning optical system that rotates around an axis of symmetry (Fig. 1). Hakenworth teaches that this embodiment of a rotating image capture system enables an increased image area even though the finger contact surface is a cylindrical elliptical surface. Therefore it would have been obvious to one of ordinary skill in the art to use a rotating optical system as taught by Hakenworth in combination with that of Maase in order to enable an increased image area of the curved surface contact area.

With regard to claim 12, Hakenworth discloses the system of claim 1, wherein the scanning optical system comprises a control system configured to control a motor, belt, and pulley system (Fig. 1, element 16).

With regard to claim 22, Hakenworth discloses the system of claim 1, wherein the light source is positioned within a cylindrical opening running along an axis of symmetry of the prism (Fig 1. element 10).

With regard to claim 30, the discussion of claim 3 applies.

Claims 8, 14-19, 21, 24, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,528,355 to Maase et al.

With regard to claim 8, the discussion of claim 7 applies. Maase discloses the communication data, but does not disclose Firewire. However it follows that communications systems utilizing FIREWIRE are exceedingly well known in the art. Official notice is taken. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use Firewire as a means of transmitting data as is well known in the art.

With regard to claim 15, Maase does not explicitly disclose capturing both palm print images. However in Figs. 1A-1C the surface appears big enough to capture both palms and would be an obvious modification in design to make the surface big enough to capture both palm prints. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to make the surface big enough to accommodate both a users palms in order to capture both palms in a single image scan.

With regard to claim 16, the discussion of claim 15 applies for the same reasons. If the curved surface (104) is big enough to accommodate both hands, then it follows that prints from both hands palms and fingers can be captured.

With regard to claim 17, the discussion of claim 15 applies.

With regard to claim 18, the discussion of claim 15 applies. Maase displays a writers palm as a part of the entire palm (Fig. 11A).

With regard to claim 19, the discussion of claim 18 applies.

With regard to claim 21, Maase discloses the curved portion has a surface area sized to receive a hand and the discussion of claims 14-19 applies to the size of the cylinder to be used. Maase further discloses the planar portion is located at an angle

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with respect to the curved portion and has a smaller surface area than the curved portion (Fig. 6).

With regard to claim 24, the discussion of claims 7 and 8 applies.

With regard to claims 31 and 33, the discussion of claims 15-19 applies.

Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,528,355 to Maase et al. in view of U.S. Patent 5,825,474 to Maase, now referred to as [Maase474].

With regard to claim 25 and 26, Maase discloses the system of claim 1, but does not disclose an air treatment system to heat, sanitize, ionize or dehumidify the non-planar prism and/or portion of the person. [Maase474] teaches the use of a heating system to inhibit condensation of moisture on the finger receiving surface (column 5, lines 60-67). [Maase474] also teaches that a high pressure blower can also be used to direct air across the receiving surface of the finger receiving surface in order to dry the moisture of the user's hand (column 2, lines 25-30). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use an air treatment system to heat the surface of the surface of Maase in order to control the amount of

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moisture on the receiving surface as taught by [Maase474] in order to maintain a dry and accurate imaging surface.

Claims 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,528,355 to Maase et al. in view of U.S. Patent 4,790,260 to Asano et al.

With regard to claim 32, Maase discloses the system of claim 1, but does not expressly disclose wherein the non-planar prism comprises a conical prism. Asano discloses the use of a conical prism in order to cause a conical divergence of the imager. Therefore it would have been obvious to one of ordinary skill in the art to use a conical prism in conjunction with the non-planar prism of Maase to cause a conical divergence in the imager.

With regard to claim 34, the discussion of claim 32 applies.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wes Tucker whose telephone number is 571-272-7427. The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571)272-7429. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wes Tucker

2-20-06



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